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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,404	01/14/2002	Bernard M. Werner	HI03027USU P02017US	2074

7590 01/28/2008  
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EXAMINER
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DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2614

MAIL DATE	DELIVERY MODE
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01/28/2008

PAPER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/046,404  
Filing Date: January 14, 2002  
Appellant(s): WERNER, BERNARD M.

Attorney Enrique Perez  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 26 July 2007 appealing from the Office action mailed 2 June 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 11-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Klayman (U.S. Patent No. 3,930,561).

Regarding claims 1, 5-6, 18-19, 21-22, and 27-28, Klayman teaches an acoustic waveguide, comprising: a first control curve; a second control curve; a third control curve; a fourth control curve; and a continuous three-dimensional least-energy-surface coincident with the first control curve, the second control curve, the third control curve and the fourth control curve that intersect a circular throat end and a non-elliptical closed control curve that defines a mouth (fig. 1; col. 2, line 59 through col. 3, line 24).

Regarding claims 2, 20, and 23, Klayman teaches the continuous three-dimensional least-energy-surface is free of discontinuities (fig. 1; col. 2, line 59 through col. 3, line 24).

Regarding claims 3, 15, and 24, Klayman teaches the continuous three-dimensional surface further includes: a minimum surface area axial section plane of the continuous three-dimensional surface formed from the first control curve, second control curve, third control curve, and fourth control curve (fig. 1; col. 2, line 44 through col. 3, line 24).

Regarding claims 4, 11, 16-17, and 25-26, Klayman teaches the minimum surface area axial section plane is at the circular throat end of the acoustic waveguide (figs. 1-2; col. 2, line 44 through col. 3, line 24).

Regarding claim 7, see the rejection of claim 1.

Regarding claim 8, see the rejection of claim 2.

Regarding claim 12, see the rejection of claims 1 and 2.

Regarding claim 13, see the rejection of claims 1, 3, and 11.

Regarding claim 14, see the rejection of claims 1 and 2 and figures 3-4 of Klayman.

#### **(10) Response to Argument**

With respect to the Appellant's argument that *the Klayman reference does not teach an inner surface that is continuous between the throat and the mouth of the horn*, the Examiner disagrees.

As stated in the Appellant's specification, "all the surfaces identified by the control curves and the circular throat...and closed control curve of the mouth (such as a rectangular or

square shape as taught on page 4 line 3)...make up a continuous-three-dimensional inner surface of acoustic waveguide (page 7, lines 2-4)....”

Examiner Response: The Klayman reference satisfies this teaching by providing a waveguide (10) having two “continuous” control curves (22, as shown in figure 3) and two additional control “continuous” curves (24, as shown in figure 4), a circular throat (12), and a non-elliptical mouth (20, square shaped).

With respect to the Appellant’s argument that *the Klayman reference does not teach an inner surface which is a least-energy-surface extending between the throat and mouth of the horn*, the Examiner disagrees.

As stated in the Appellant’s specification on page 5, lines 7-12, “the curves...are typically mirror images about an axis of symmetry.”

On page 7 lines 2-6, “all the surfaces identified by the control curves and the circular throat...and closed control curve of the mouth (such as a rectangular or square shape as taught on page 4 line 3)...make up a continuous-three-dimensional inner surface of acoustic waveguide.... Minimization of ...discontinuous edges, protrusions or steps located on the inner surface of the acoustic waveguide is sought.”

On page 7 lines 24-30, “a least-energy-surface...[is] a surface that passes through the specified controlling geometry in a manner that provides the minimum change in curvature when the rate of change of local curvature change is integrated in the mathematical sense (summed)

over the entire surface.” On page 7 lines 30-32, the Appellant states “the least-energy-surface in [the] waveguide is defined by the ...control curves...in addition to the circular throat ...and the ...mouth.”

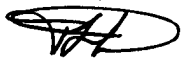
Examiner Response: The Klayman reference satisfies this teaching by providing a mirrored circular conical continuous curves (22, 24; figures 3-4) subtended by a throat (12) and a mouth (20) having a least-energy-surface (16, 18, 28; inner walls of the different sections) which provides a minimum change in curvature (symmetrical sound dispersion with minimal discontinuities, col. 2 lines 59-68) relative to the specified controlling geometry over the surface.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.


For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




Phylesha Dabney  
December 19, 2007

Conferees:  
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